

0905060.082104

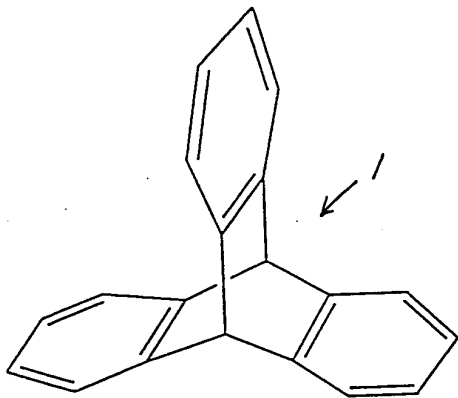
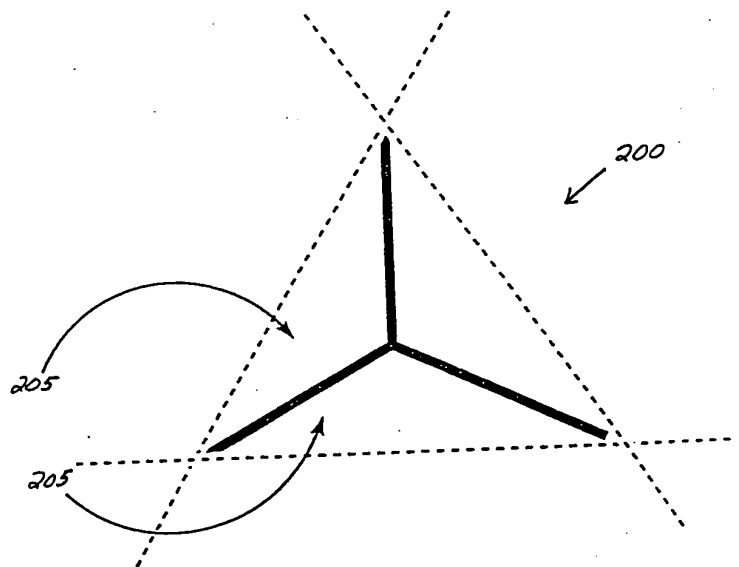


FIG. 1A
PRIOR ART



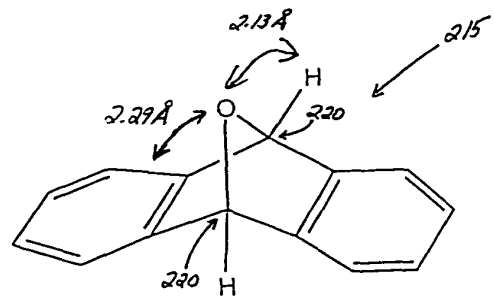
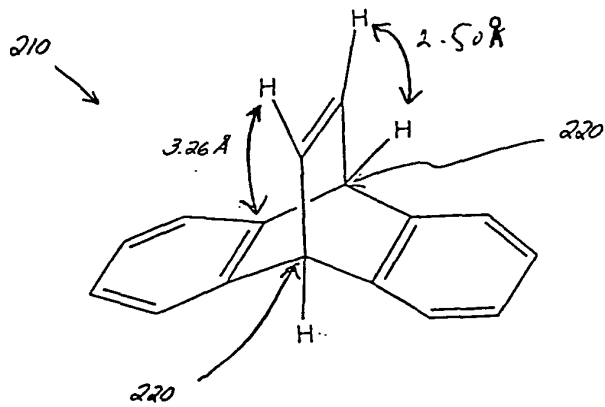
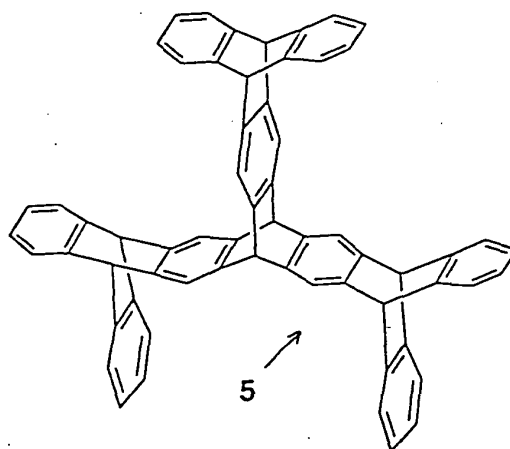
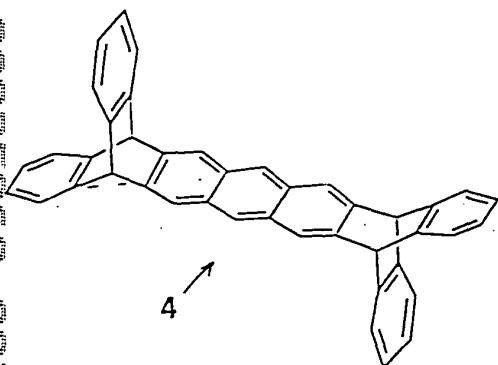
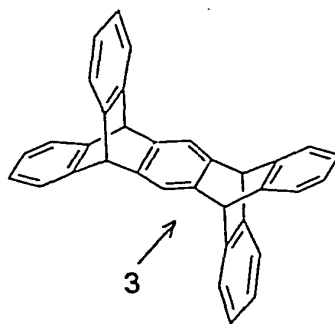
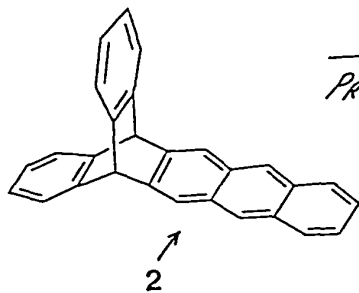


FIG. 1B

Prior Art

00035050.002101

FIG. 1C
PRIOR ART



0935650-002101

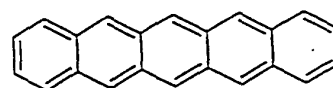
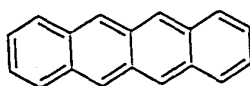
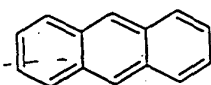
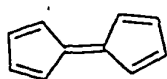
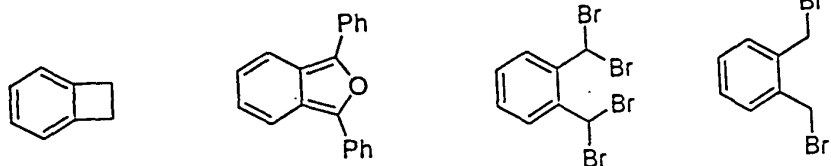
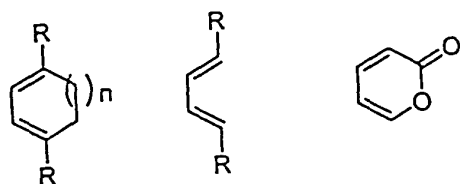
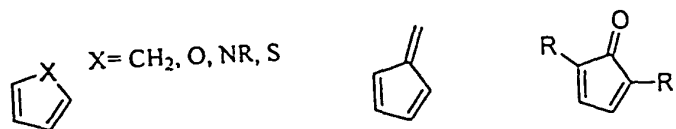
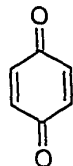


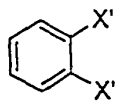
Fig. 1e

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0935060.03401



$X = \text{CH}_2, \text{C}=\text{O}, \text{O}, \text{NR}, \text{S}$



$X' = \text{Cl}, \text{Br}, \text{I}$

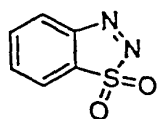
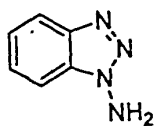
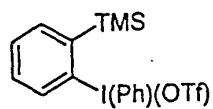
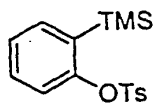
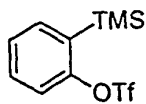
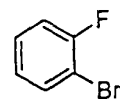
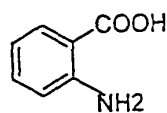
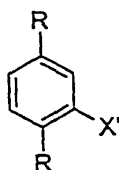


Fig. 1f

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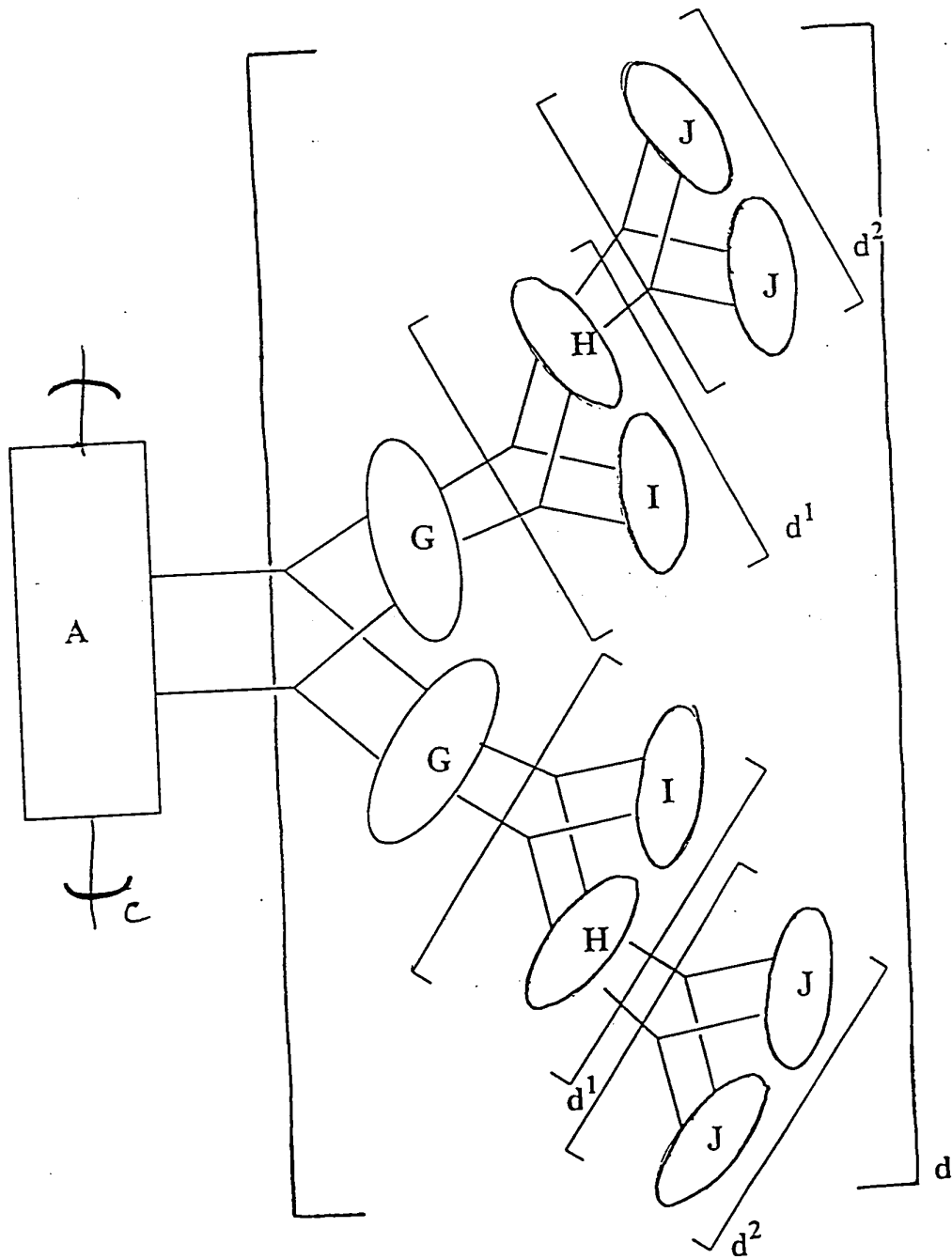
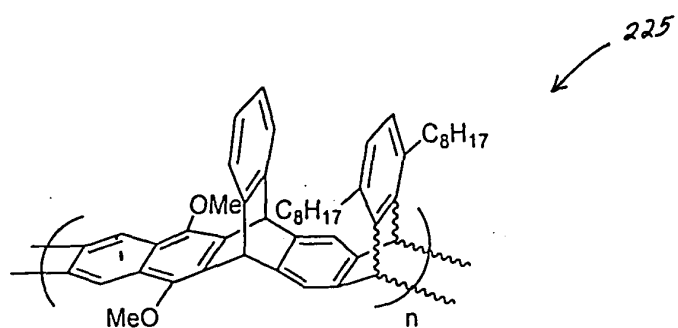


Fig. 1g

FIG. 1H



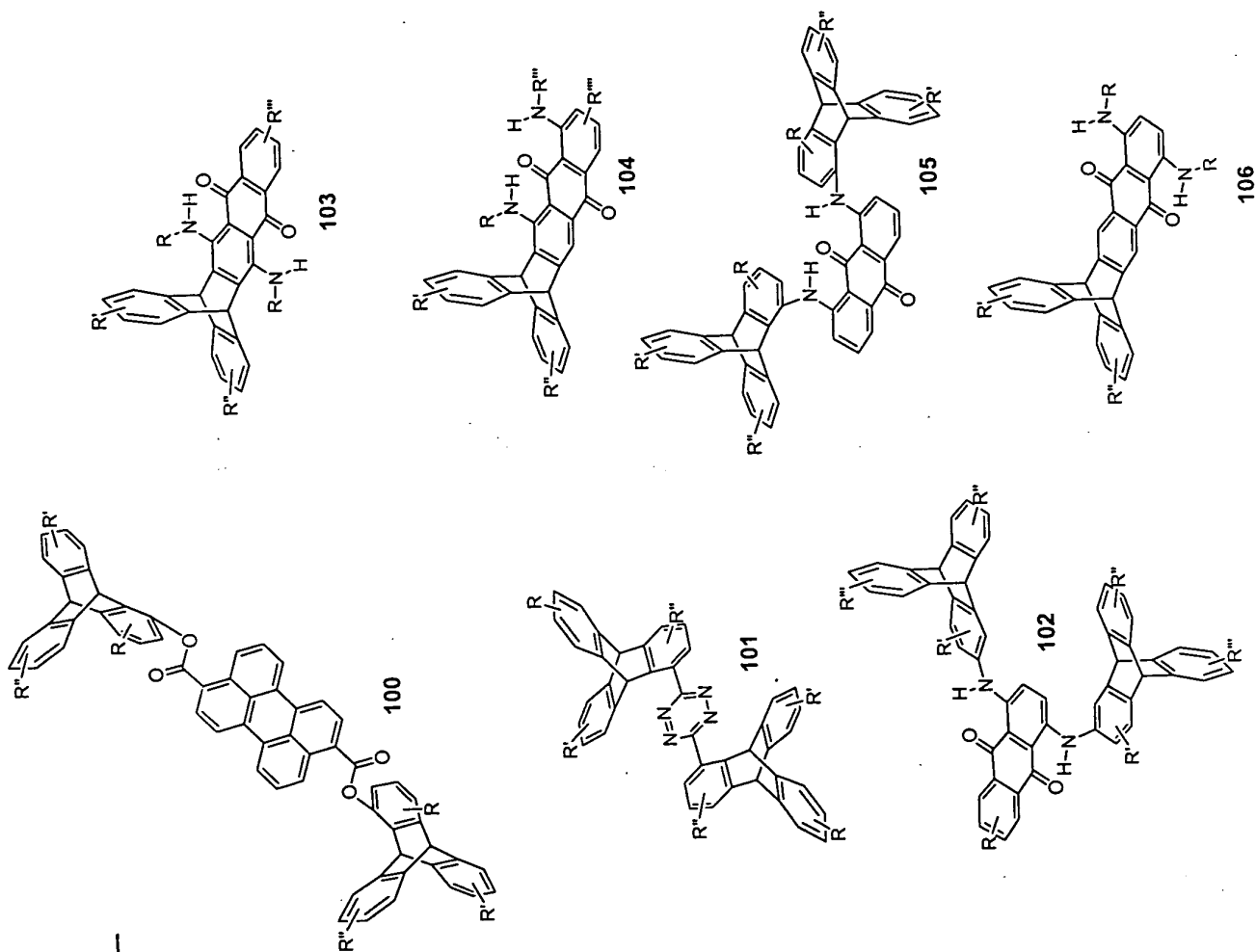
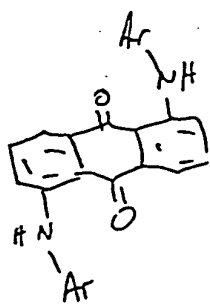
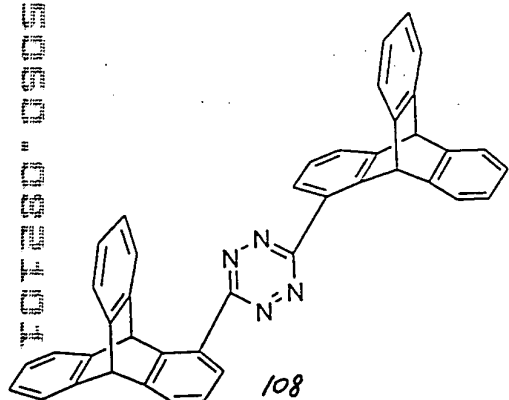
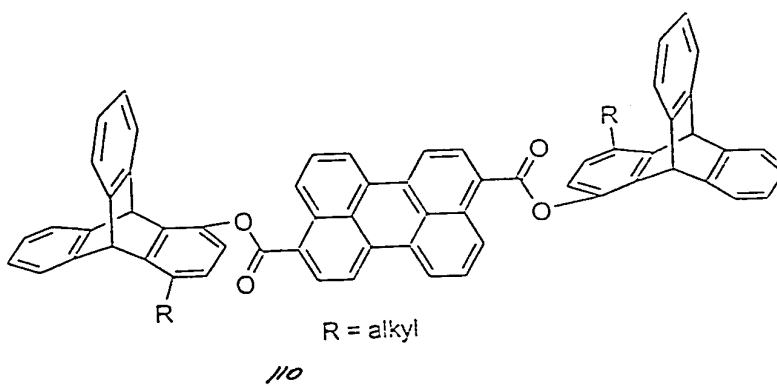
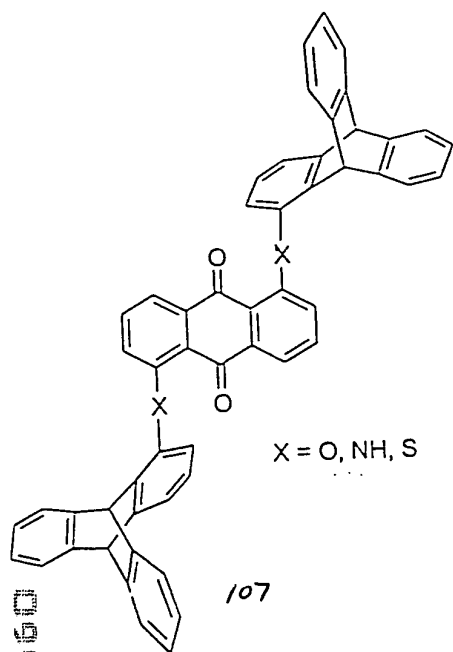


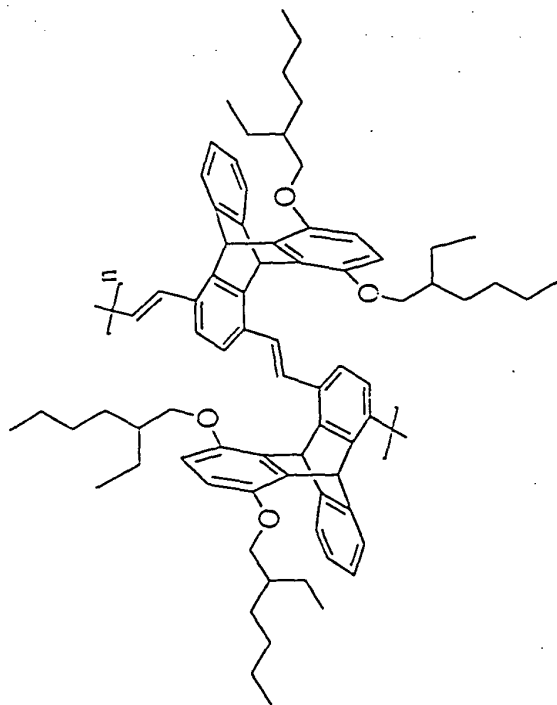
FIG. 1K



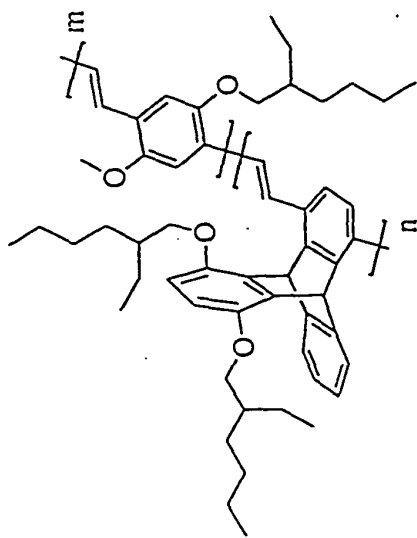
09935060.002104

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Fig. 12

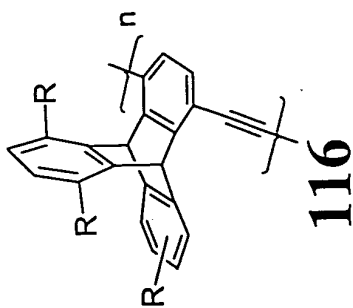
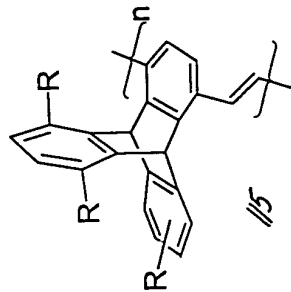
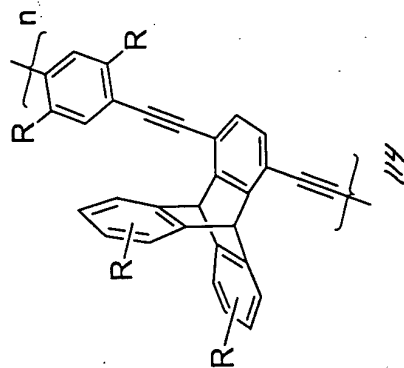
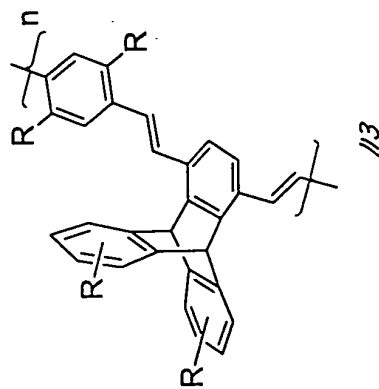


III



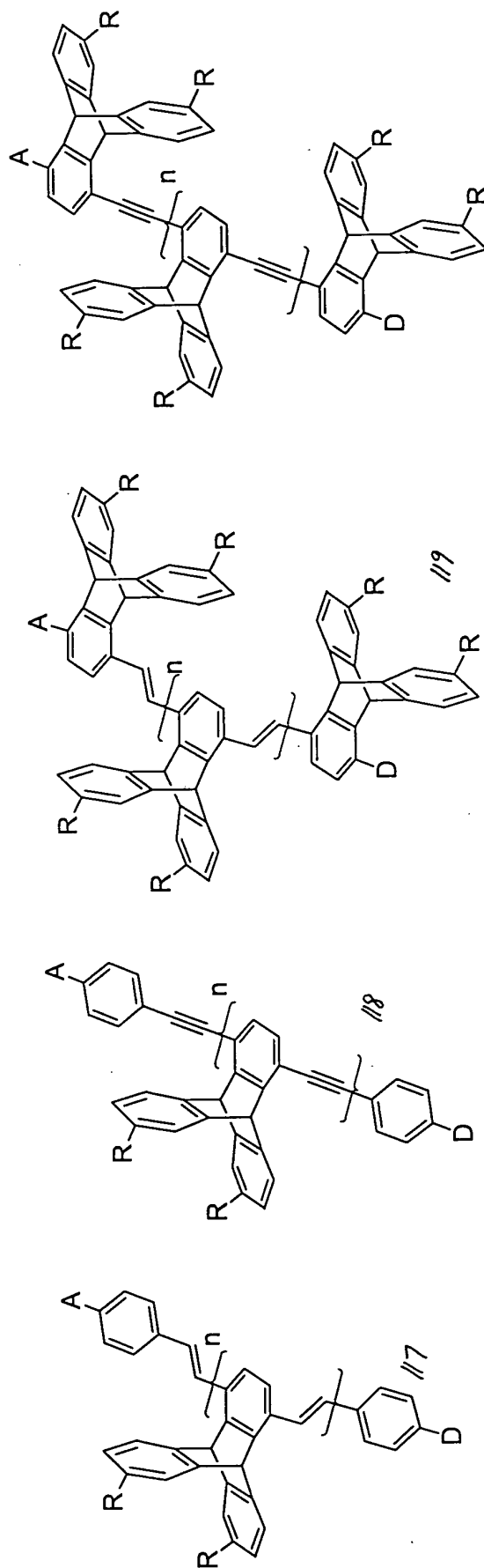
112

Fig. 1M



$R = C_nH_{2n+1}, C_nF_{2n+1}, OC_nH_{2n+1}$

Fig. 10



A = CN, C_nF_{2n+1} ;
 D = $N(C_nH_{2n+1})_2$, OC_nH_{2n+1} ;
 R = C_nH_{2n+1} , C_nF_{2n+1} , OC_nH_{2n+1}

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Figure 2

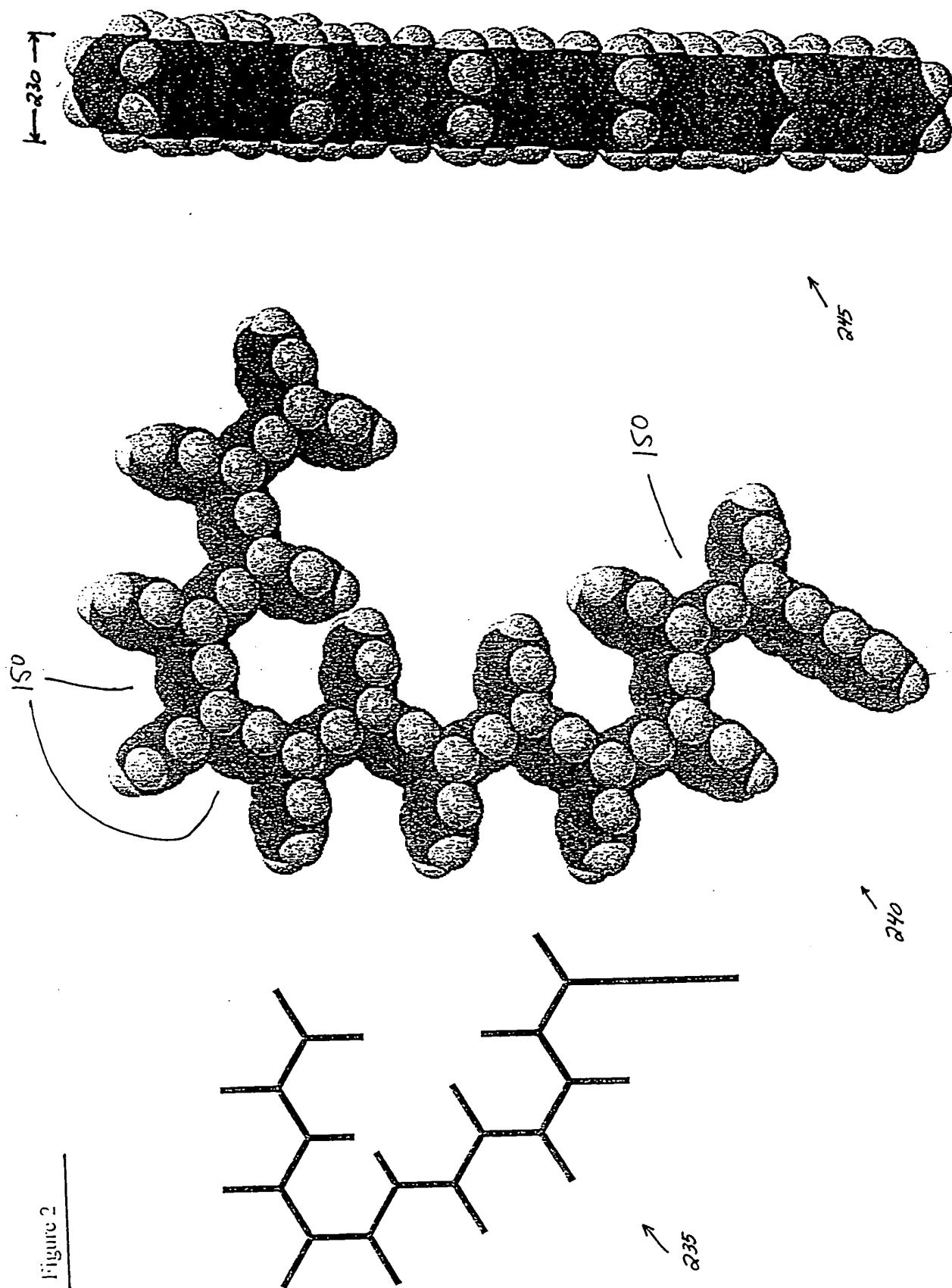


Fig. 2A 01250" 0905E660

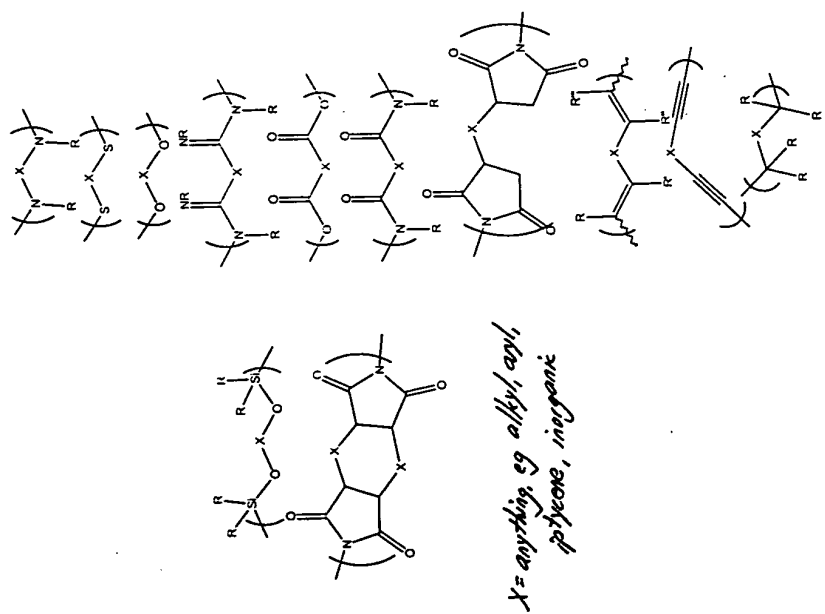
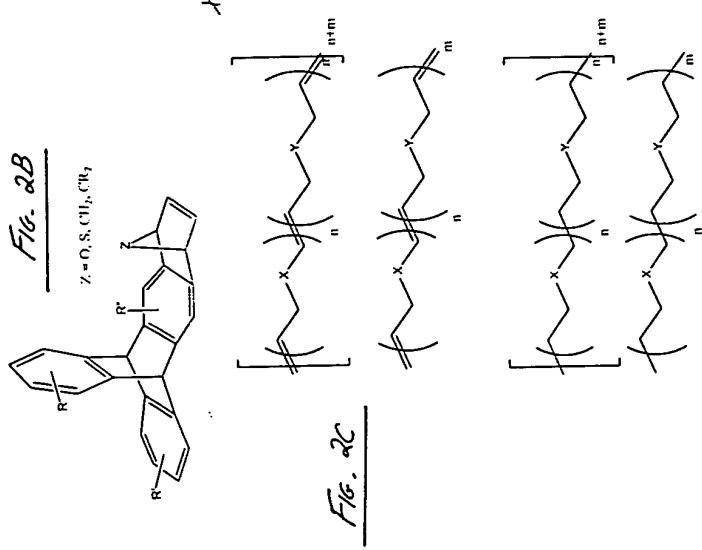


Fig. 2B



X or Y contains an ipityene

Where X = Y or X ≠ Y

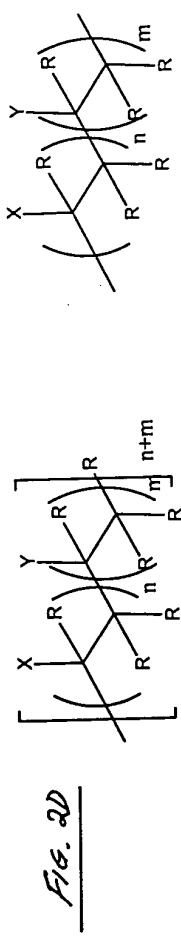
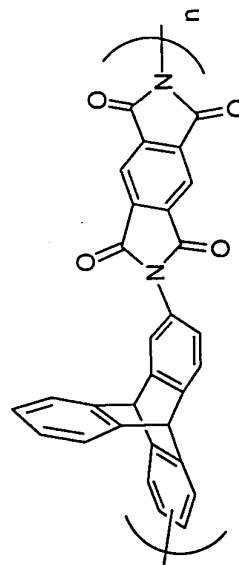
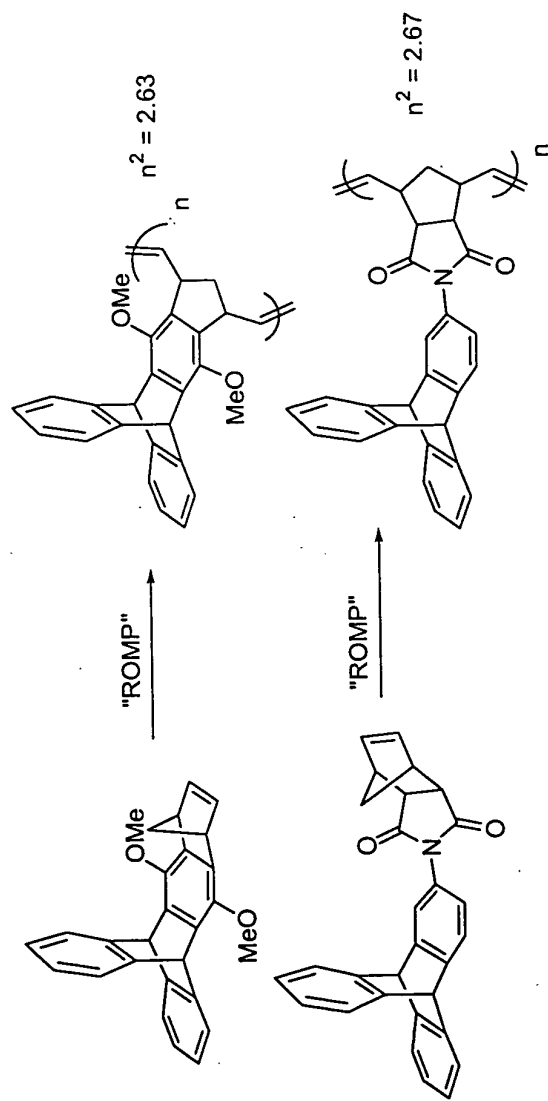


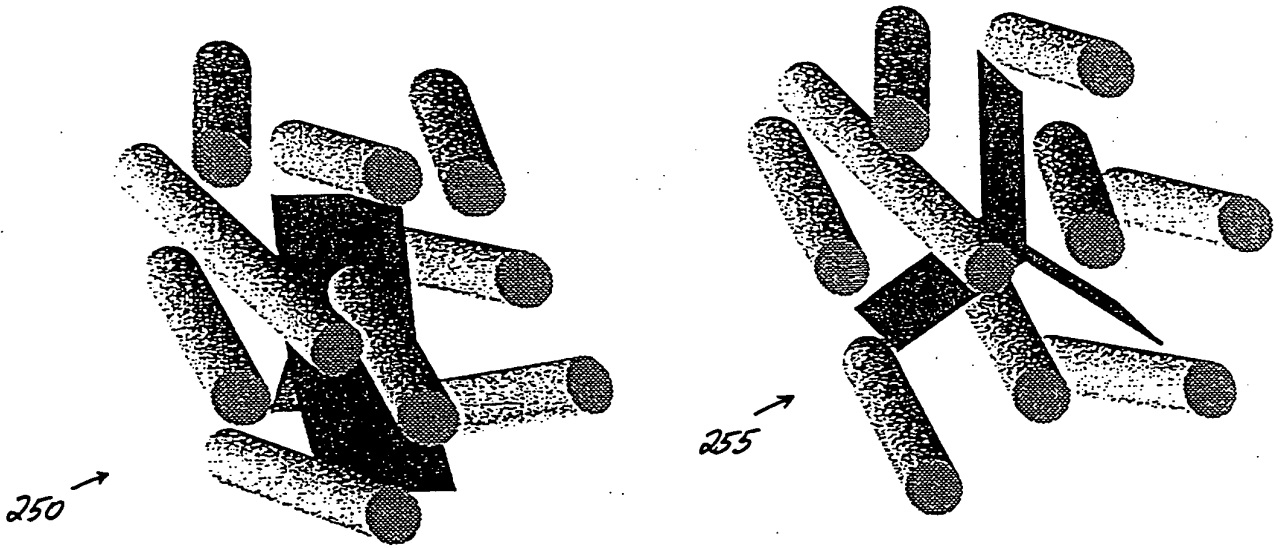
Fig. 2D

If X = Y, then polymer may be atactic, isotactic or syndiotactic
 If X ≠ Y, then each block may be atactic, isotactic or syndiotactic
R = functionalized ipityene



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FIG. 3



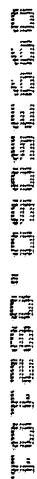


FIG. 5

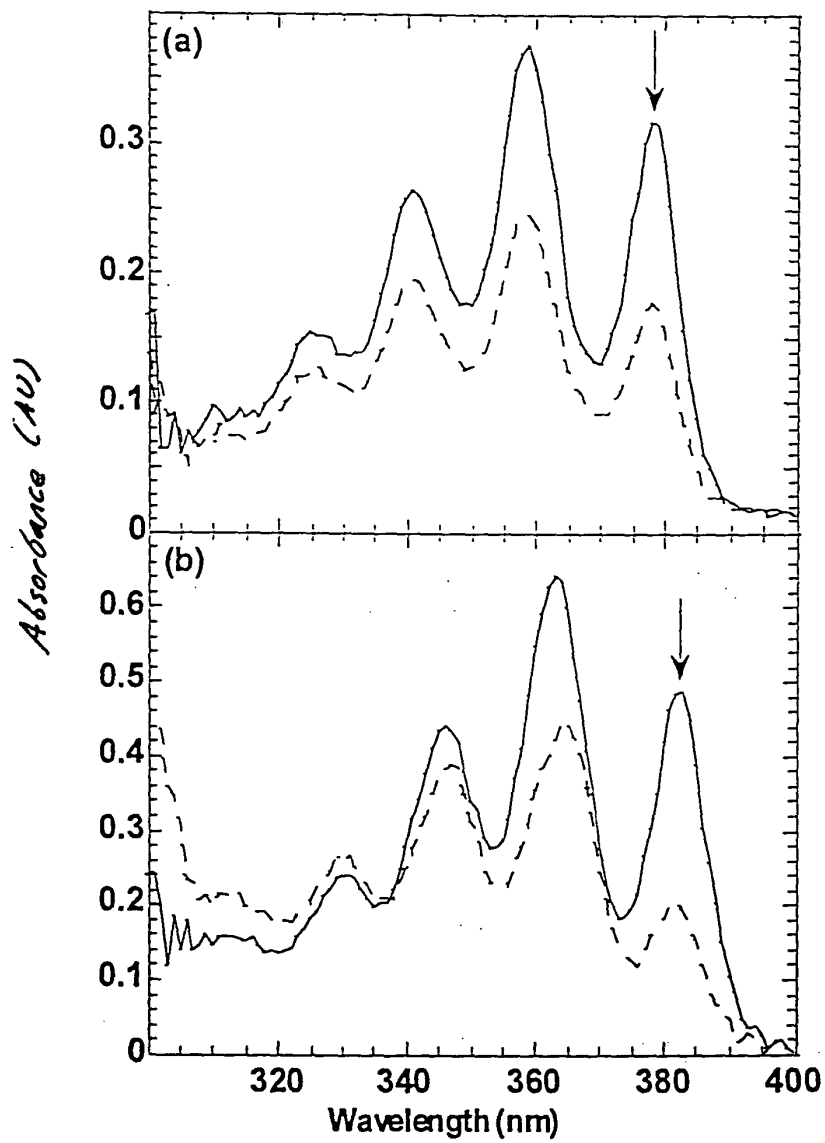
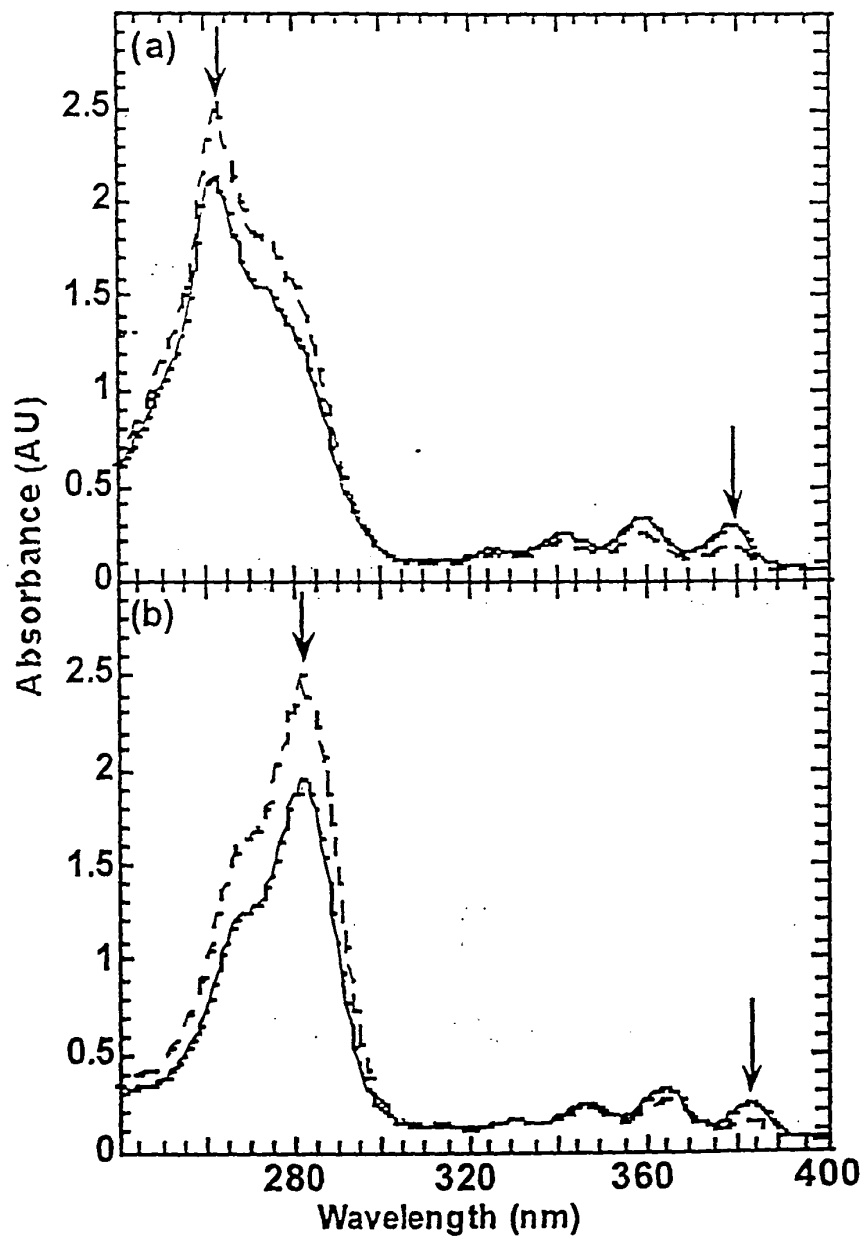


Fig. 6



09935050.082401
FOI280-05056660

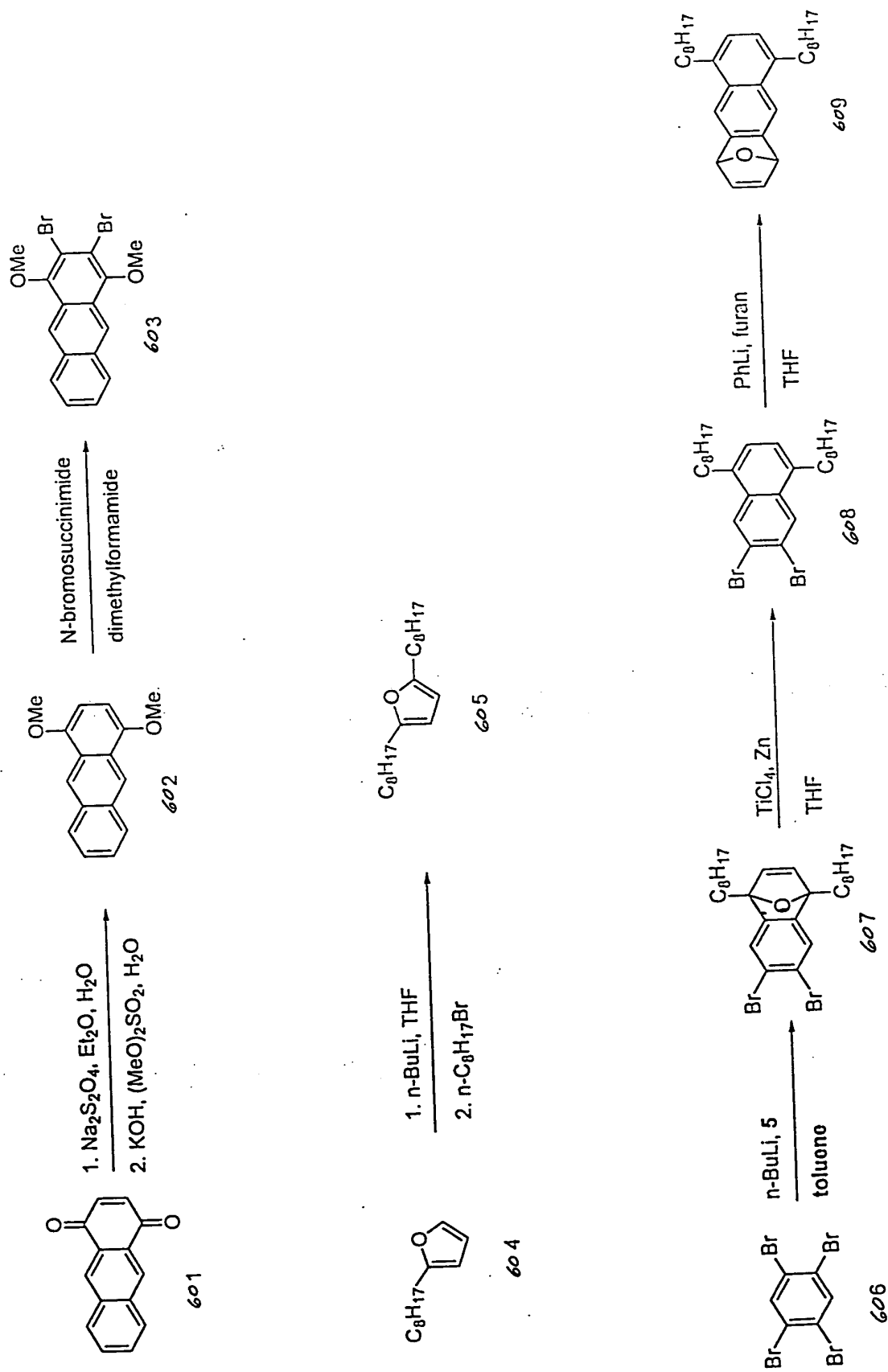
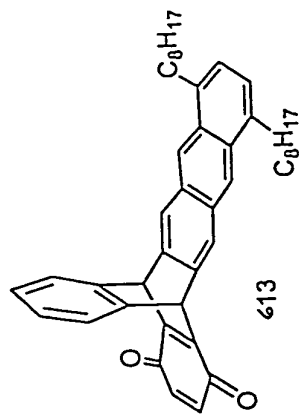
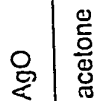
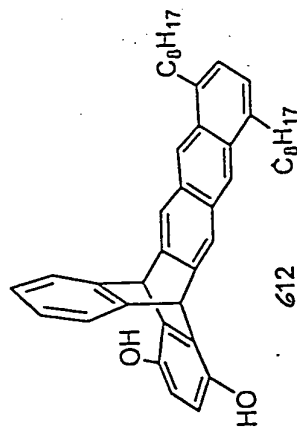
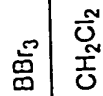
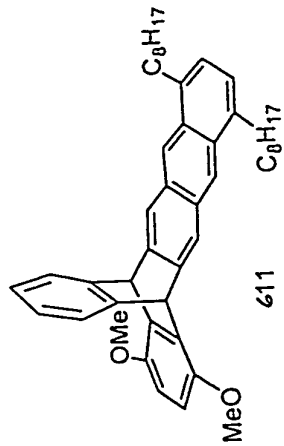
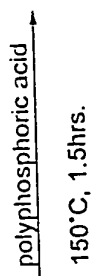
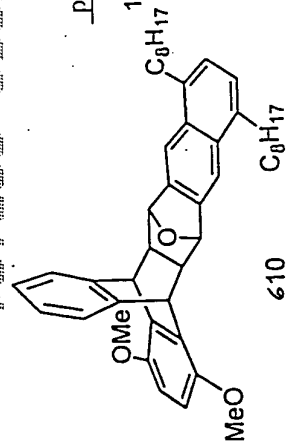
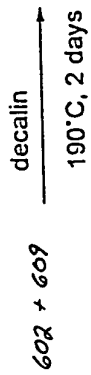
[illegible]

Fig. 6B



TOP SECRET 0905660

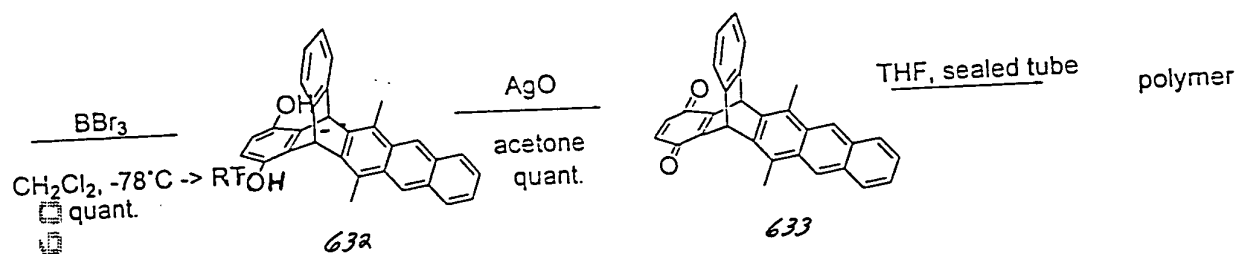
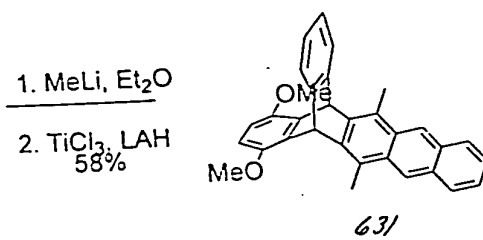
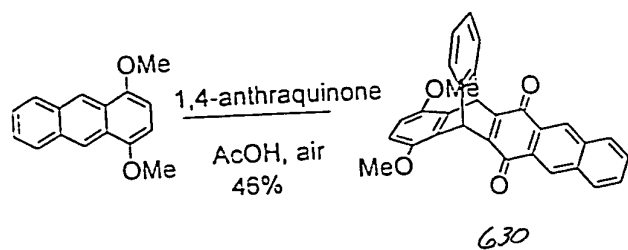


Fig. 6C

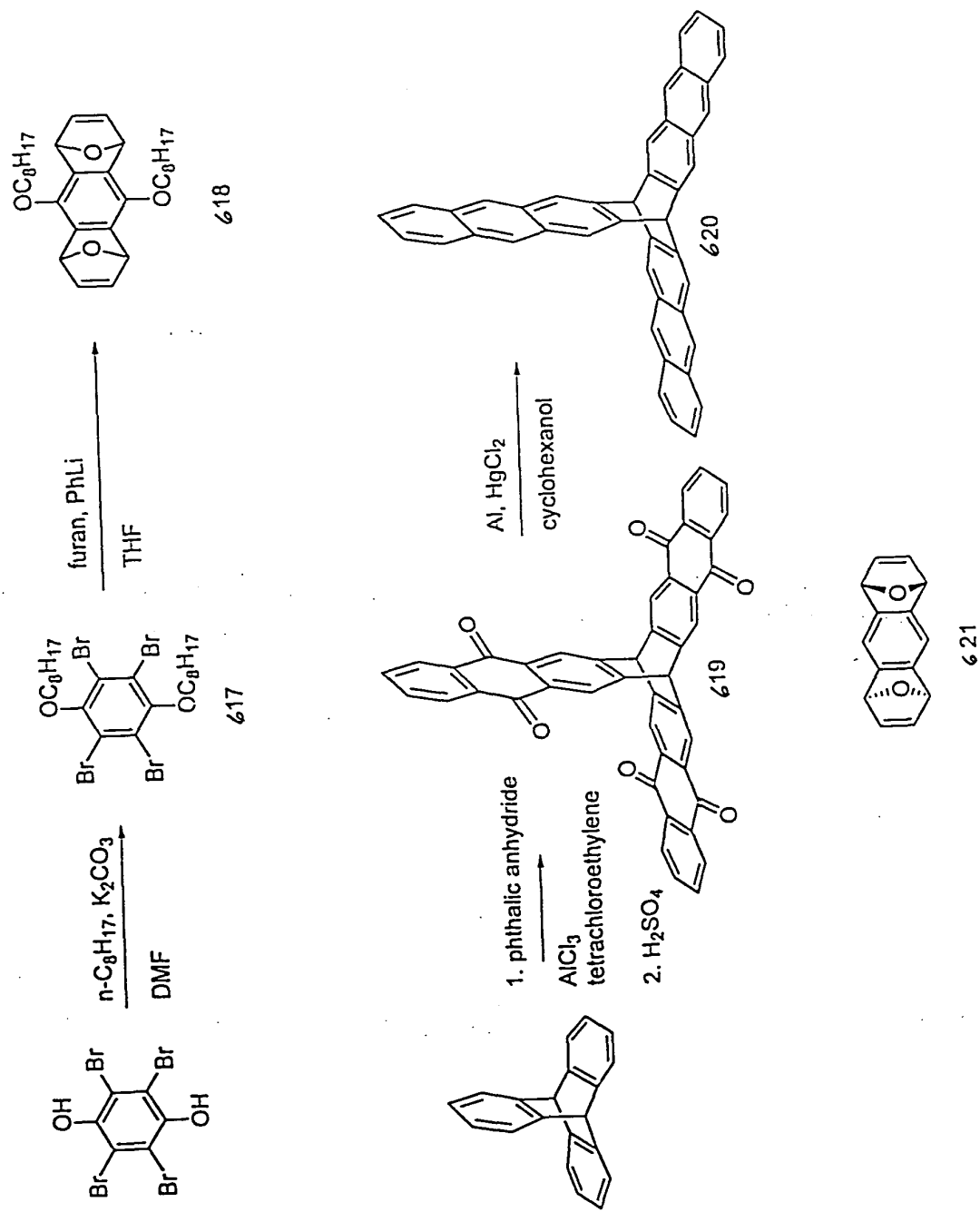
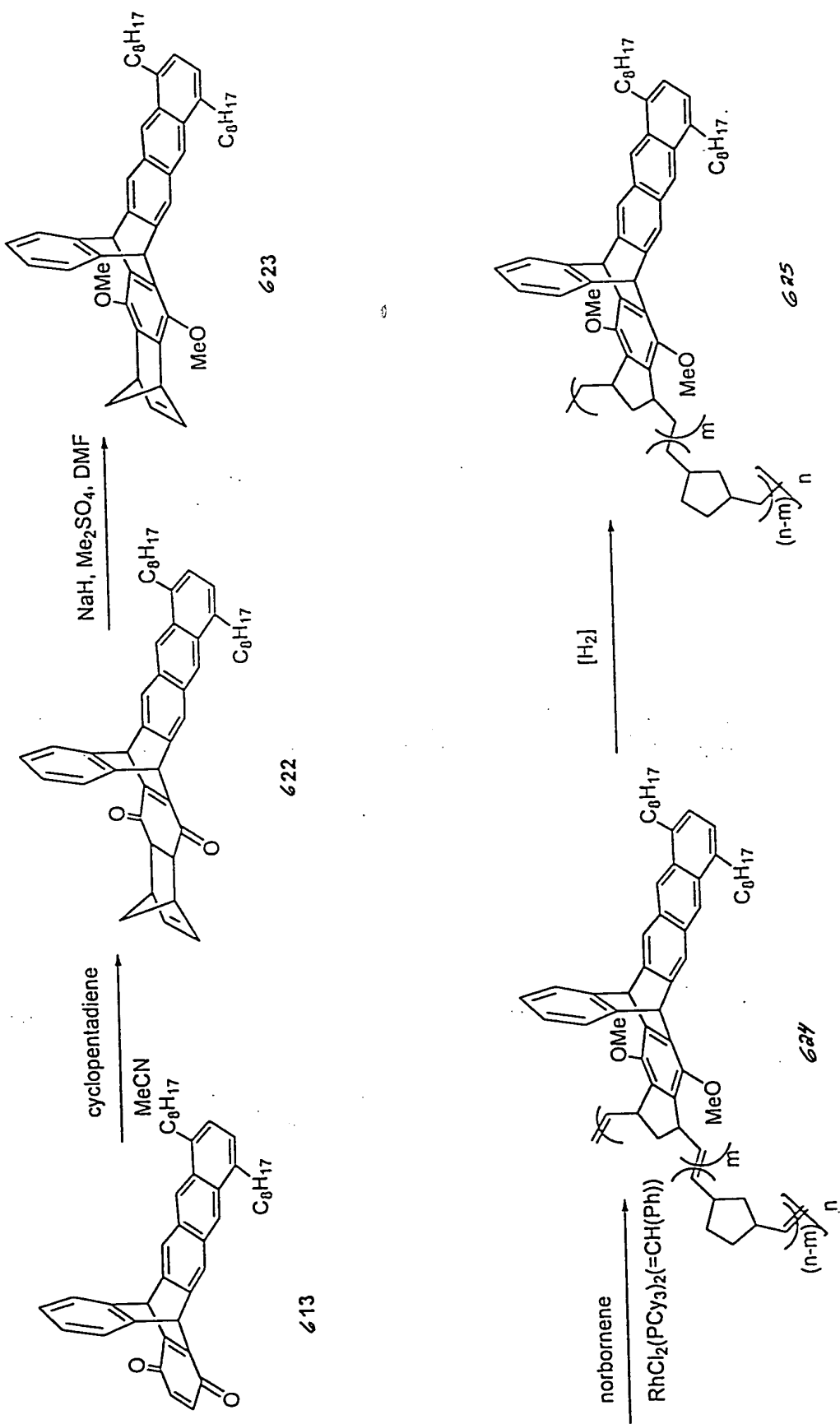


Fig. 6F

TOP SECRET



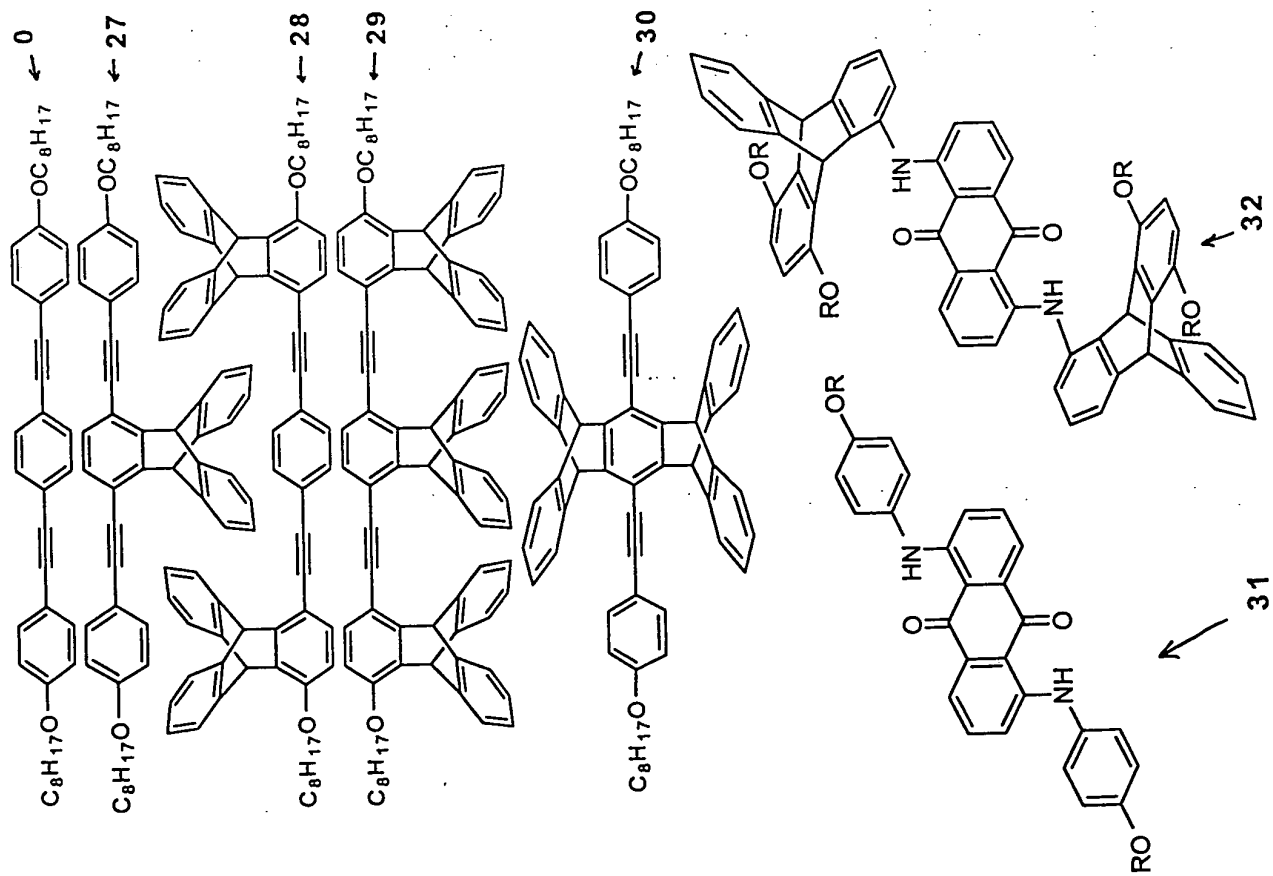
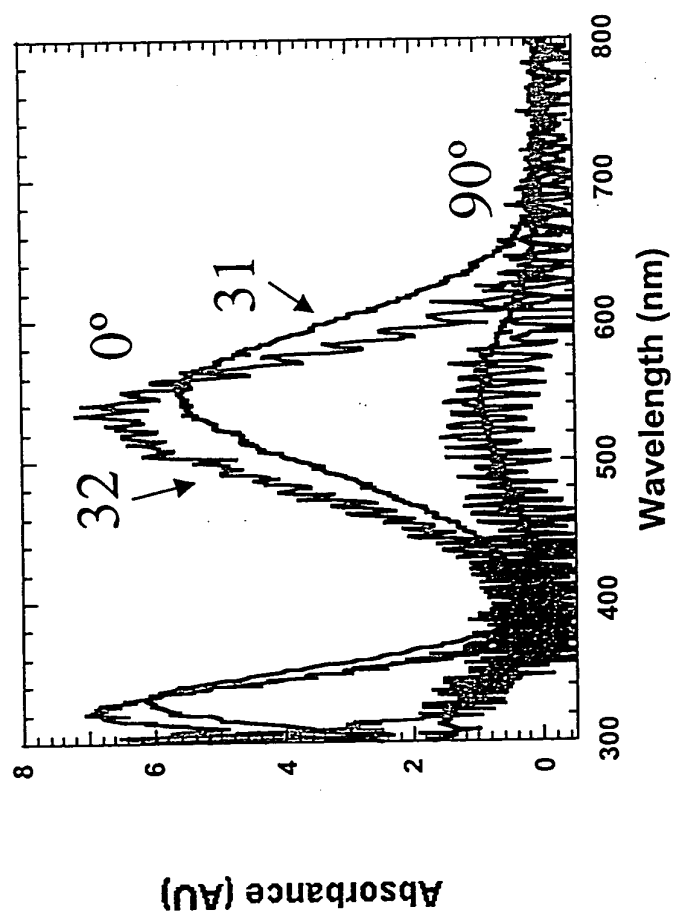


Figure 7. ($\text{R} = \text{nC}_8\text{H}_{17}$)

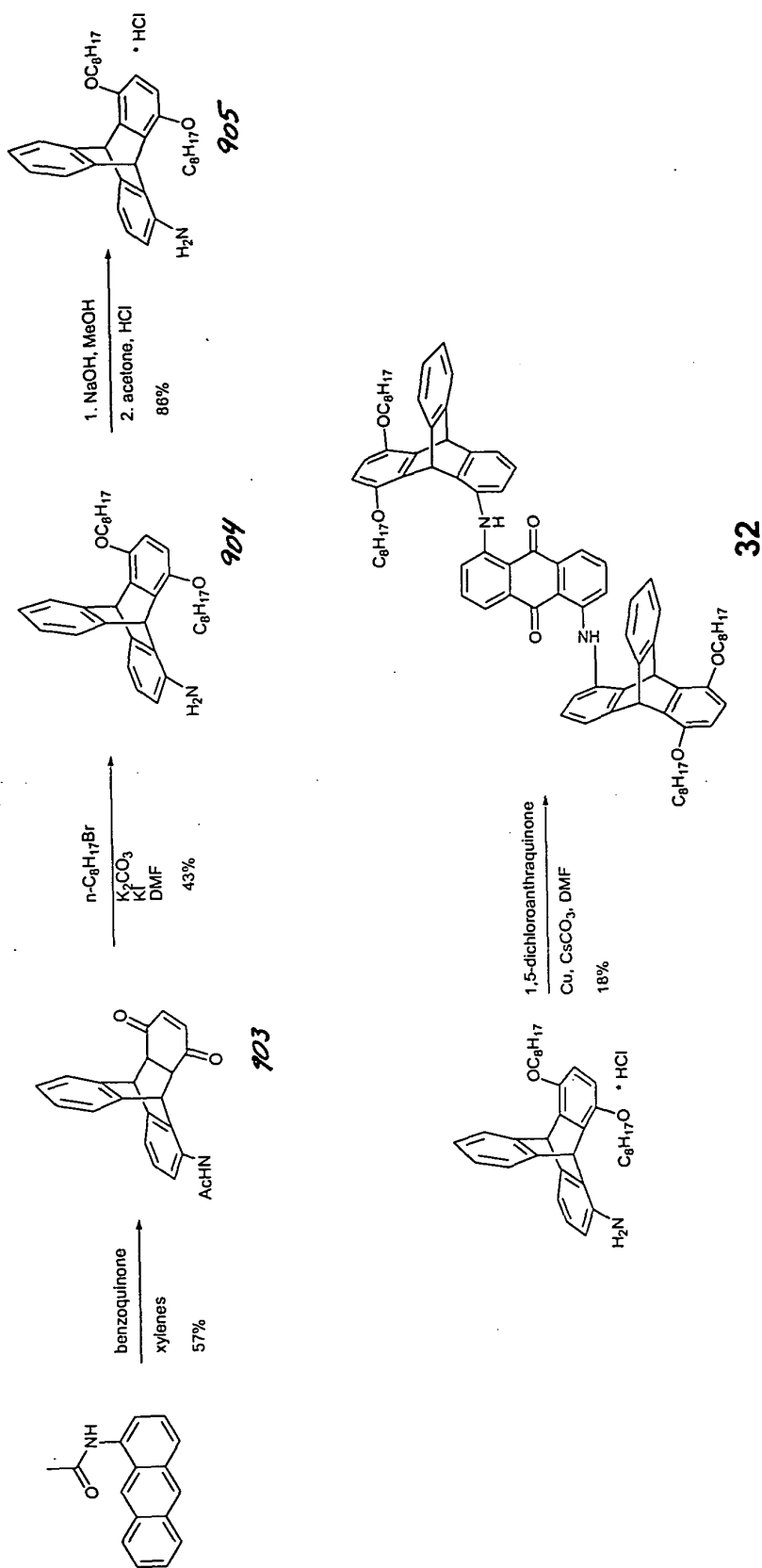
Figure 9



SECRET



Fig. 9B



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Fig. 9c

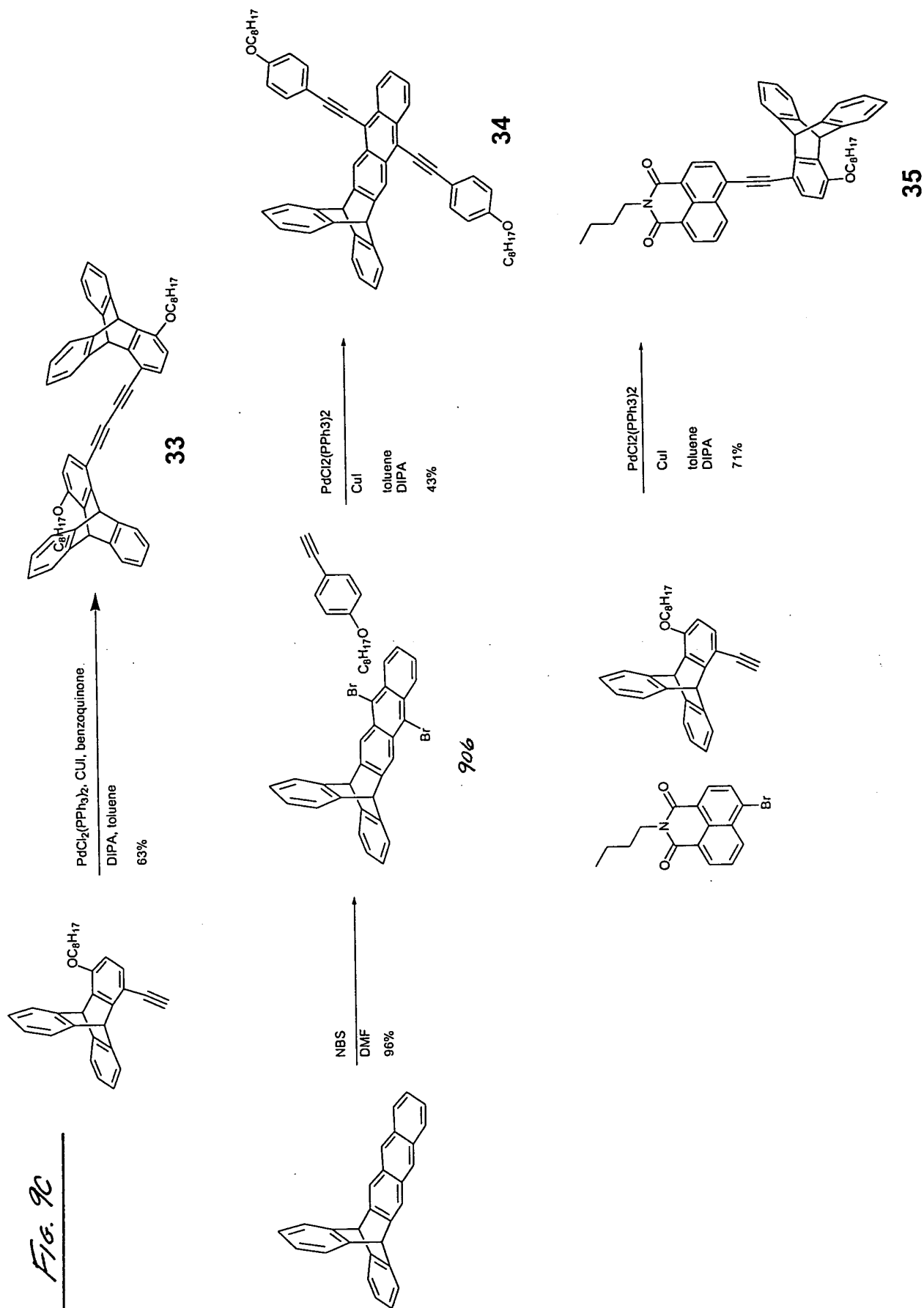
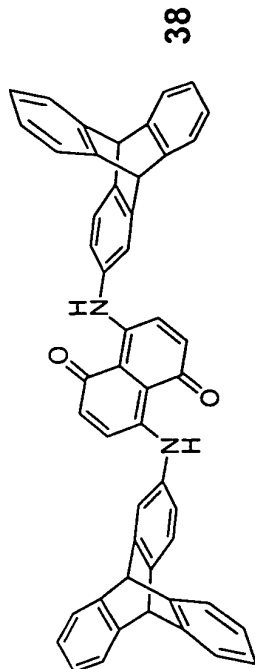
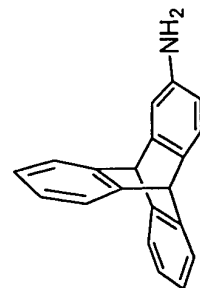
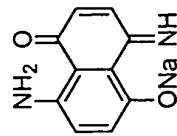
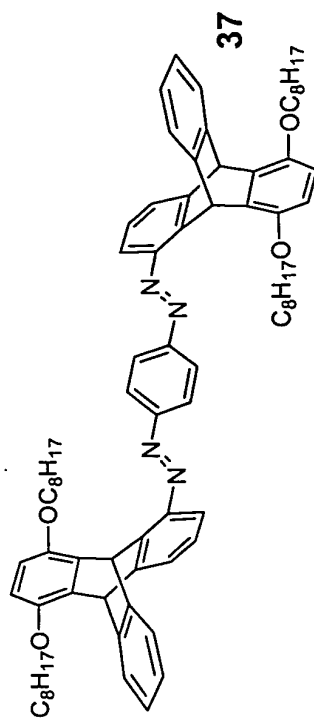
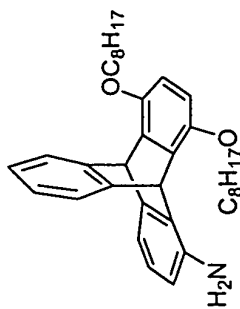
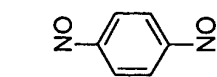
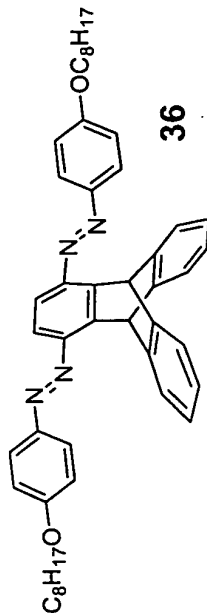
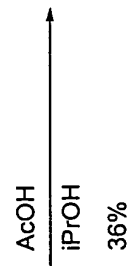
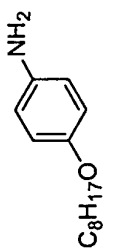
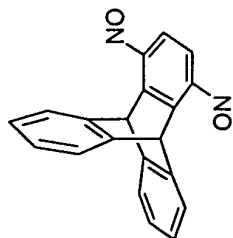
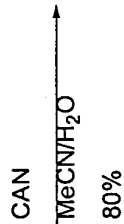
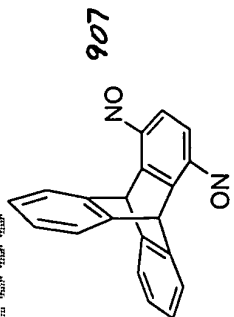
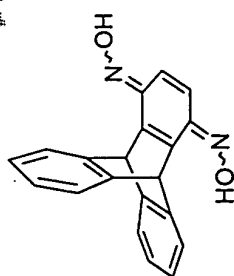
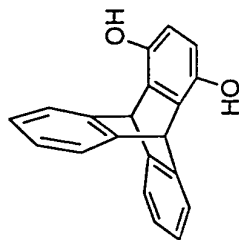


Fig. 90

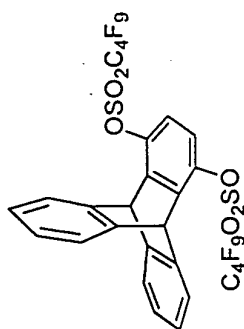




39

$C_4F_9SO_2F$,
 NEt_3

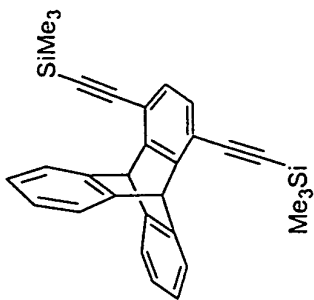
90%



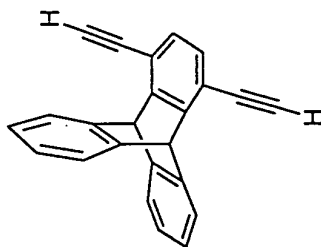
40

Trimethylsilylacetylene,
 $Pd(ba)_2$, PPh_3 , CuI ,
 $i-Pr_2NH$

86 %



41



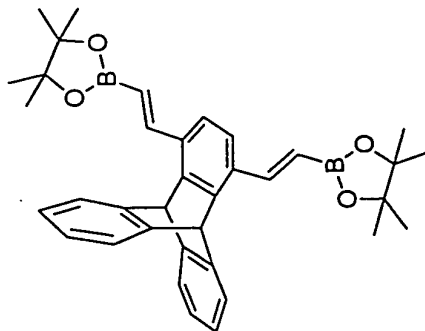
42

KOH ,
 $MeOH$,

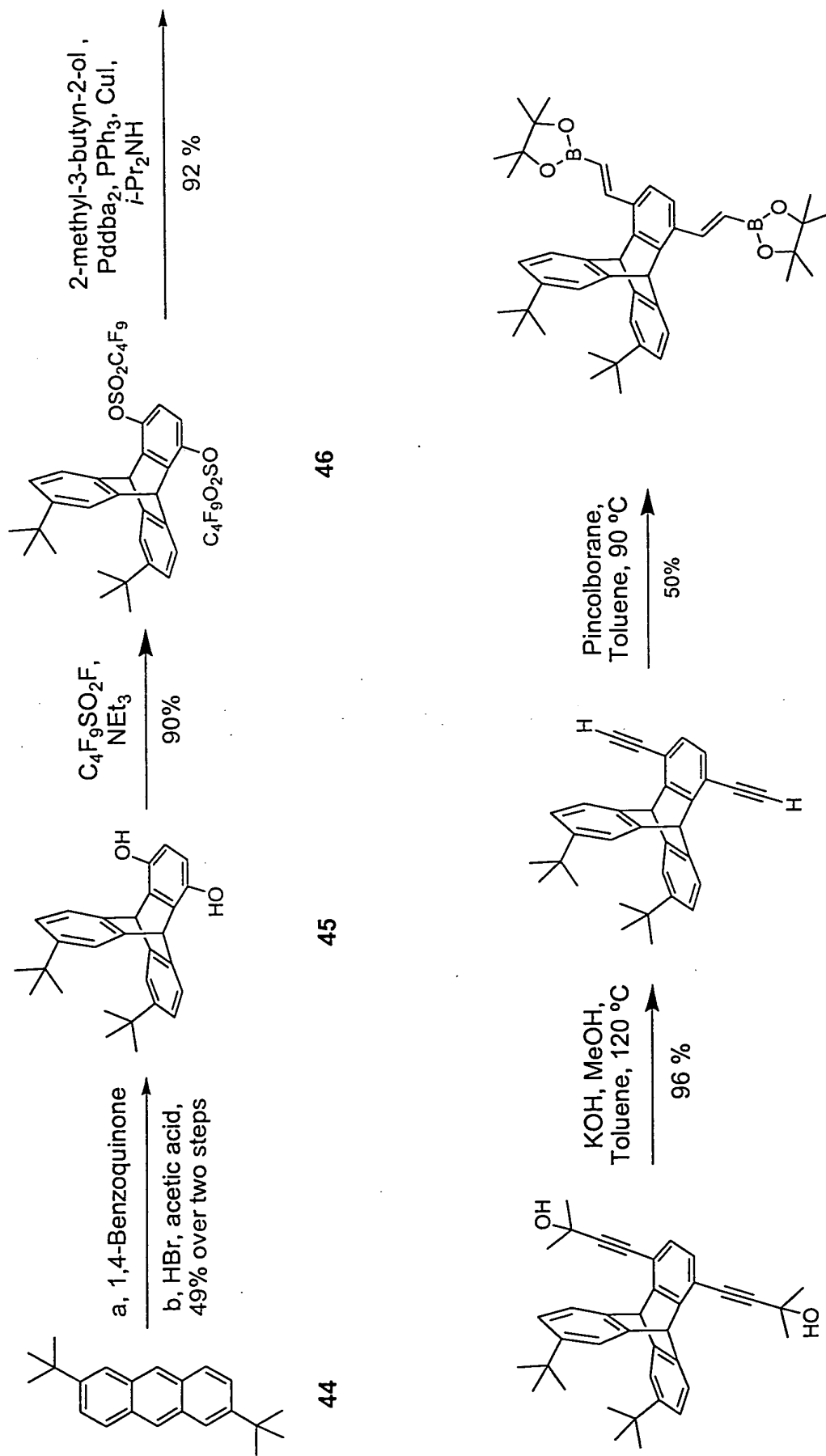
90%

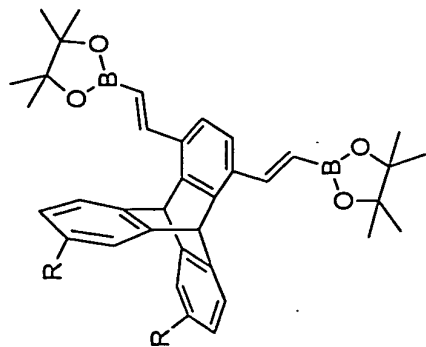
Picolborane,
Toluene, 90 °C

50%

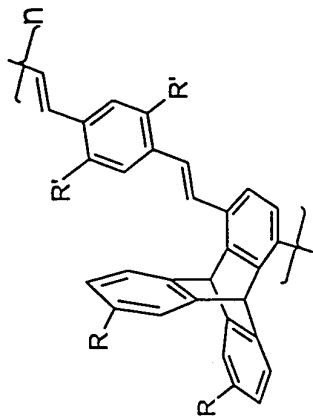
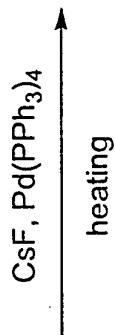
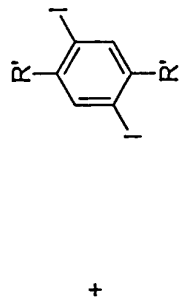


43



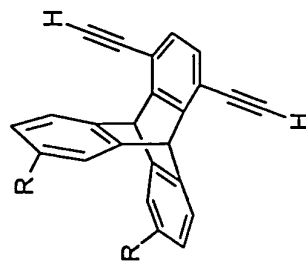


43, R = H
49, R = *tert*-butyl

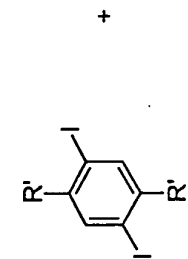


52, R = H, R' = -O-*n*-C₁₂H₂₅
53, R = *tert*-butyl, R' = -O-*n*-C₁₂H₂₅
54, R = H, R' = 2-ethyl-hexyl
55, R = *tert*-butyl, R' = 2-ethyl-hexyl

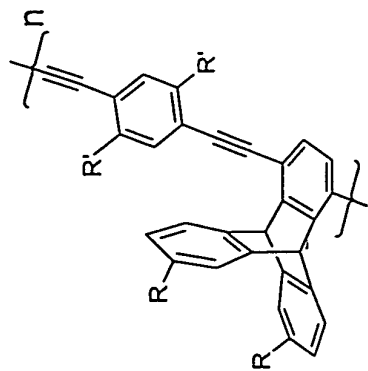
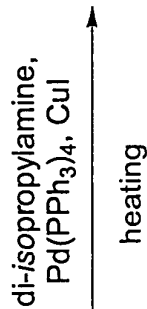
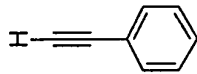
50, R' = -O-*n*-C₁₂H₂₅
51, R' = 2-ethyl-hexyl



42, R = H
48, R = *tert*-butyl



+



51, R' = 2-ethylhexyl

58

56, R = H, R' = 2-ethyl-hexyl
57, R = *tert*-butyl, R' = 2-ethyl-hexyl

Fig. 9H

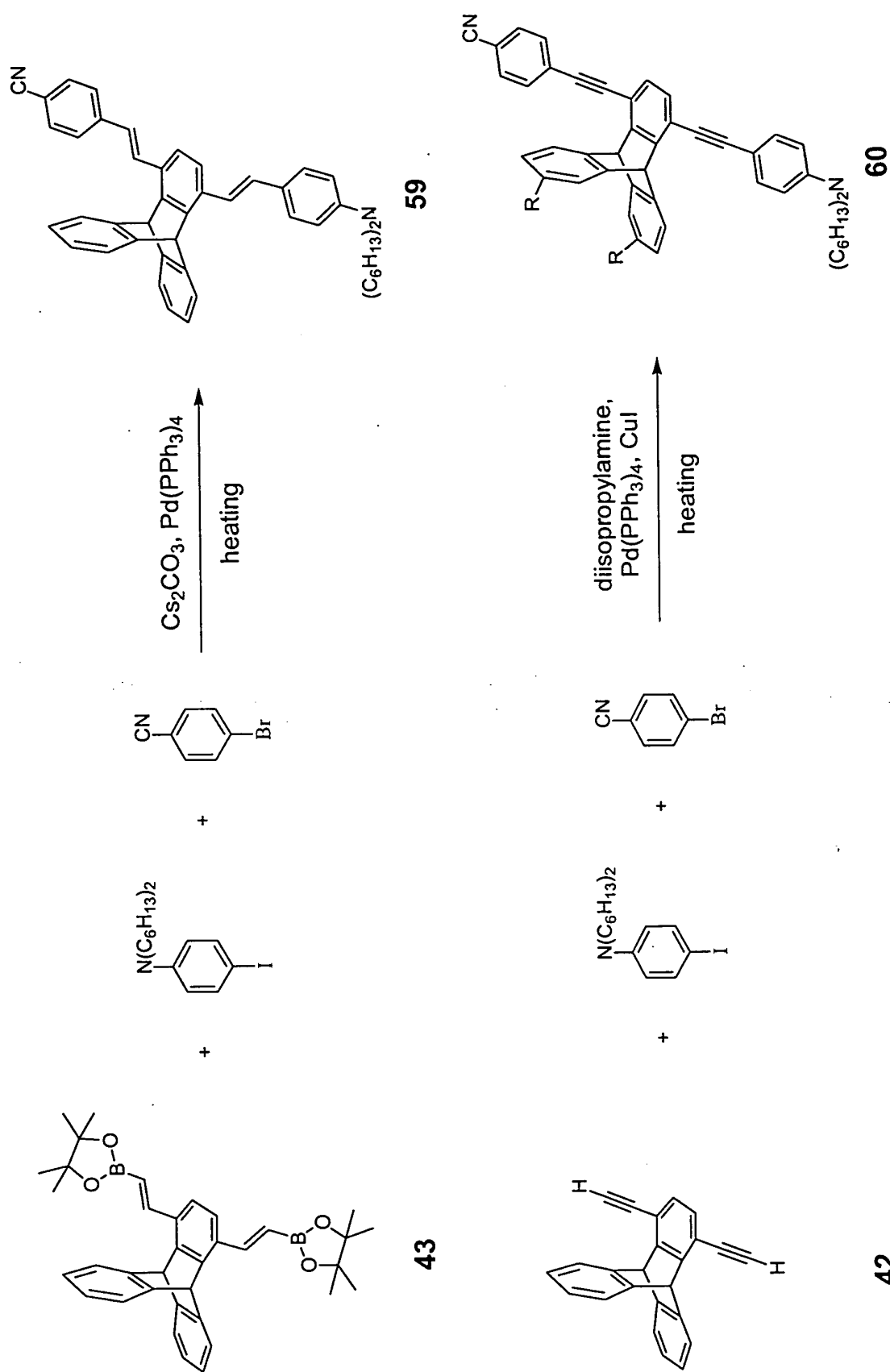


Figure 10

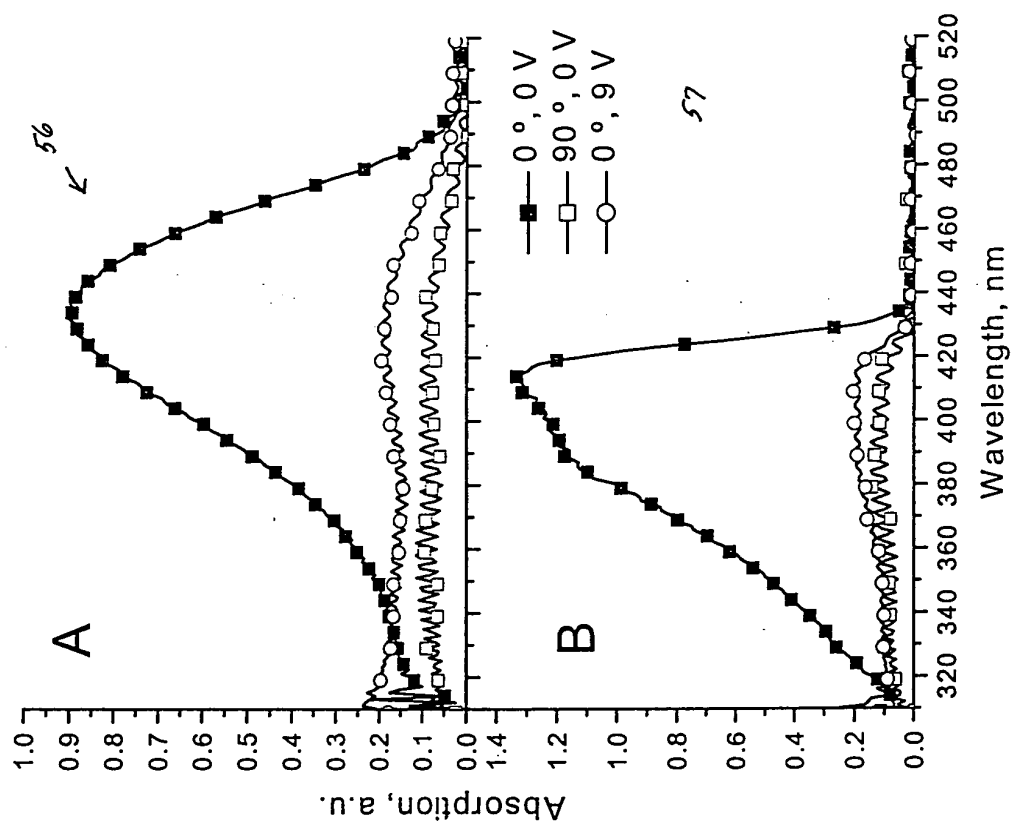


Figure 11

